

ABSTRACT

An example method for fabricating a semiconductor device includes forming a well, a source region, and a drain region in a substrate, forming a gate oxide film on the substrate and coating a polysilicon film on the gate oxide film. Further, the example method includes forming a trench isolation in the substrate by a dry etching process, forming a oxide film on the inside surface of the trench isolation, providing a dielectric material to fill in the trench isolation, planarizing the dielectric material to expose the top surface of the polysilicon film, and forming a gate by dry etching the polysilicon film.